K011188

Special 510(k) Premarket Notification GE Medical Systems - LOGIQ 9 Ultrasound System April 16, 2001

MAY 1 8 2001

### Attachment B:

Summary of Safety and Effectiveness Prepared in accordance with 21 CFR Part 807.92(c).



GE Medical Systems

General Electric Company P.O. Box 414, Milwaukee, WI 53201

#### Section a):

1.

**GE Medical Systems** Submitter:

PO Box 414

Milwaukee, WI 53201

Contact Person:

Allen Schuh.

Manager, Safety and Regulatory Engineering Telephone: 414-647-4385; Fax: 414-647-4090

Date Prepared: April 16, 2001

2.

Device Name: GE LOGIQ 9 Diagnostic Ultrasound System

Ultrasonic Pulsed Echo Imaging System, 21 CFR 892.1560. 90-IYO Ultrasonic Pulsed Doppler Imaging System, 21 CFR 892.1550, 90-IYN

3. Marketed Device:

GE LOGIQ 700 diagnostic ultrasound system: K930768, K960527, K964617, K964886, K990226, K993365, K993364, K000516, K000571 currently in commercial distribution.

- 4. Device Description: The GE LOGIQ 9 is a full featured general purpose diagnostic ultrasound system. It consists of a mobile console approximately 65 cm wide, 96 cm deep and 144 cm high that provides digital acquisition, processing and display capability. The user interface includes a computer keyboard, specialized controls and a color video CRT display. This modification will provide users with significantly improved ergonomics, operation, maneuvering and ease of use.
- 5. Indications for Use: The device is intended for use by a qualified physician for ultrasound evaluation of Fetal; Abdominal; Pediatric; Small Organ (breast, testes, thyroid); Neonatal Cephalic; Adult Cephalic; Cardiac (adult and pediatric); Peripheral Vascular; Musculo-skeletal Conventional and Superficial; Urology (including prostate); Transrectal; Transvaginal; and Intraoperative (abdominal, thoracic, vascular and neurosurgical).
- 6. Comparison with Predicate Device: The GE LOGIQ 9 is of a comparable type and substantially equivalent to the current GE LOGIQ 700. It has the same technological characteristics, is comparable in key safety and effectiveness features, it utilizes similar design, construction, and materials, and has the same intended uses and basic operating modes as the predicate device.

#### Section b):

- 1. Non-clinical Tests: The device has been evaluated for acoustic output, biocompatibility, cleaning and disinfection effectiveness as well as thermal, electrical and mechanical safety, and has been found to conform with applicable medical device safety standards.
- 2. Clinical Tests: None required.
- 3. Conclusion: Intended uses and other key features are consistent with traditional clinical practice, FDA guidelines, and established methods of patient examination. The design and development process of the manufacturer conforms with 21 CFR 820, ISO 9001 and EN 46001 quality systems. The device conforms to applicable medical device safety standards and compliance is verified through independent evaluation with ongoing factory surveillance. Diagnostic ultrasound has accumulated a long history of safe and effective performance. Therefore, it is the opinion of GE Medical Systems that the GE LOGIQ 9 Diagnostic Ultrasound is substantially equivalent with respect to safety and effectiveness to devices currently cleared for market.

Food and Drug Administration



MAY 1 8 2001 9200 Corporate Boulevard Rockville MD 20850

Mr. Allen Schuh Manager, GE Ultrasound Safety and Regulatory Engineering GE Medical Systems

P.O. Box 414 MILWAUKEE WI 53201

Re: K011188

Trade Name: GE LOGIQ 9 Diagnostic Ultrasound System

Regulatory Class: II 21 CFR 892.1550 Product Code: 90 IYN 21 CFR 892.1560 Product Code: 90 IYO Dated: April 16, 2001

Received: April 18, 2001

Dear Mr. Schuh:

We have reviewed your Section 510(k) notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

This determination of substantial equivalence applies to the following transducers intended for use with the GE LOGIQ 9 Diagnostic Ultrasound Systems, as described in your premarket notification:

Transducer Model Numbers
3.5C
$\overline{\text{M7C}}$
E8C
<u>7L</u>
$1\overline{0}$ L
<u> 10T</u>

112L M12I

4S 7S 10S 2D 6D

If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval) it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895. A substantially equivalent determination assumes compliance with the Good Manufacturing Practice requirement, as set forth in the Quality System Regulation (QS) for Medical Devices: General (GMP) regulation (21 CFR Part 820) and that, through periodic QS inspections, the FDA will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, the Food and Drug Administration (FDA) may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification does not affect any obligation you may have under sections 531 and 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

This determination of substantial equivalence is granted on the condition that prior to shipping the first device, you submit a postclearance special report. This report should contain complete information, including acoustic output measurements based on production line devices, requested in Appendix G, (enclosed) of the Center's September 30, 1997 "Information for Manufacturers Seeking Marketing Clearance of Diagnostic Ultrasound Systems and Transducers." If the special report is incomplete or contains unacceptable values (e.g., acoustic output greater than approved levels), then the 510(k) clearance may not apply to the production units which as a result may be considered adulterated or misbranded.

The special report should reference the manufacturer's 510(k) number. It should be clearly and prominently marked "ADD-TO-FILE" and should be submitted in duplicate to:

Food and Drug Administration Center for Devices and Radiological Health Document Mail Center (HFZ-401) 9200 Corporate Boulevard Rockville, Maryland 20850

This letter will allow you to begin marketing your device as described in your premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus permits your device to proceed to market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4591.

Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers Assistance at its toll-free number (800) 638-2041 or at (301) 443-6597 or at its internet address "http://www.fda.gov/cdrh/dsmamain.html".

If you have any questions regarding the content of this letter, please contact Rodrigo C. Perez at (301) 594-1212.

Sincerely yours,

Nancy C. Brogdon

Director, Division of Reproductive, Abdominal and Radiological Devices

Office of Device Evaluation

Center for Devices and Radiological Health

Enclosure(s)

### **GE LOGIQ 9 Ultrasound System**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation												
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power		Harmonic Imaging	Coded Pulse	Other		
Ophthalmic													
Fetal / Obstetrics	P	Р	Р	Р	Р	Р	Р	Р	P	Р			
Abdominal <sup>[1]</sup>	Р	Р	Р	Р	Р	Р	Р	Р	Р	P			
Pediatric	Р	Р	Р	P	Р	Р	Р	Р	P	Р	,		
Small Organ <sup>[2]</sup>	P	P	Р		Р	Р	Р	P	Р	P			
Neonatal Cephalic	Р	Р	Р	P	P	Р	Р	Р	Р	Р			
Adult Cephalic	Р	Р	Р	Р	Р	Р	P	Р	Р	P			
Cardiac <sup>[3]</sup>	P	P	Р	Р	Р	Р	Р	Р	Р	Р			
Peripheral Vascular	Р	P	Р	Р	P	Р	Р	Р	Р	Р			
Musculo-skeletal Conventional	Р	P	Р		Р	Р	Р	Р	Р	Р			
Musculo-skeletal Superficial	Р	Р	Р		Р	Р	Р	P	Р	Р			
Other <sup>[4]</sup>	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р			
Exam Type, Means of Access							<u></u>						
Transesophageal	Р	P	Р	Р	P	Р	Р	Р	Р	Р			
Transrectal	Р	Р	Р		Р	Р	Р	Р	Р	Р			
Transvaginal	Р	P	Р		Р	Р	Р	P	Р	Р			
Transuretheral													
Intraoperative <sup>[5]</sup>	Р	Р	P		Р	Р	P	Р	Р	Р			
Intraoperative Neurological	Р	Р	Р		Р	Р	Р	Р	Р	Р			
Intravascular													
Laparoscopic													

N = new indication; P = previously cleared by FDA; E = added under Appendix E

Notes: [1] Abdominal includes renal, GYN/Pelvic

- [2] Small organ includes breast, testes, thyroid.
- [3] Cardiac is Adult and Pediatric.
- [4] Other use includes Urology/Prostate
- [5] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV).
- [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Division of Reproductive, Abdominal, ENT,

and Radiological Devices

510(k) Number\_

### **GE LOGIQ 9 with 3.5C Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

			·	r	Mode	of Ope		·	· · · · · · · · · · · · · · · · · · ·		
Clinical Application	В	М	PW	CW	Color	Color M			Harmonic	Coded	Othe
Anatomy/Region of Interest			Doppler	Doppler	Doppler	Doppler	Doppler	Modes	Imaging	Pulse	
Ophthalmic											
Fetal / Obstetrics	Р	P	Р		Р	Р	Р	Р	Р	P	
Abdominal <sup>[1]</sup>	Р	Р	Р		Р	Р	Р	Р	P	Р	
Pediatric											
Small Organ (specify)											
Neonatal Cephalic											
Adult Cephalic											
Cardiac											
Peripheral Vascular	Р	Р	Р		Р	Р	Р	Р	Р	Р	
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>	Р	Р	р		Р	Р	Р	Р	Р	Р	
Exam Type, Means of Access											
Transesophageal											<del></del>
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

Intravasoular									 	
Laparoscopic										
N = new indication; P = pr	eviously	cleared	by FDA	E = ac	ded und	der Appe	endix E			
Notes: [1] Abdominal incl	udes GY	'N;								
[4] Other use inclu	ides Uro	logy;								
[*] Combined mod	es are B	3/M, B/C	olor M, I	B/PWD,	B/Color/	PWD, B	/Power/	PWD.		
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Division of Reproductive, Abdominal, ENT, and Radiological Devices

510(k) Number \_\_\_\_\_\_ \( \frac{7}{2} \) / / / 88 \( \frac{7}{2} \)

### **GE LOGIQ 9 with M7C Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

					Mode	of Ope	eration				
Clinical Application	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes	Harmonic Imaging	Coded Pulse	
Anatomy/Region of Interest  Ophthalmic				''	, ,						
Fetal / Obstetrics	Р	Р	Р		P	Р	Р	P	Р	Р	
Abdominal	Р	Р	Р		P	Р	Р	Р	P	Р	
Pediatric	Р	Р	P		Р	Р	Р	Р	P	P	
Small Organ <sup>[2]</sup>	Р	Р	Р		Р	Р	Р	Р	Р	P	
Neonatal Cephalic									-	.,	
Adult Cephalic											
Cardiac											
Peripheral Vascular	·P	Р	P		Р	Р	Р	Р	Р	Р	
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other (specify)											
Exam Type, Means of Access											
Transesophageal											
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological											
Intravascular											
Laparoscopic									<u> </u>		

Intraoperative Neurological	l					ļ	ļ		 ļ	ļ
Intravascular	ĺ		İ			·				
Laparoscopic										<u> </u>
N = new indication; P = pr	eviously	cleared	by FDA	$\exists$ ; $E = ac$	dded un	der Appe	endix E			
Notes: [2] Small organ inc	cludes br	east, te	estes, th	yroid.						
[*] Combined mod	es are B	/M, B/C	olor M,	B/PWD,	B/Color	/PWD, B	3/Power/	PWD.		
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Prescription User (Per 21 CFR 801.109)

#### **GE LOGIQ 9 with E8C Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

					Mode	of Ope	eration				
Clinical Application  Anatomy/ Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	
Ophthalmic											
Fetal / Obstetrics	Р	Р	Р		Р	Р	Р	Р	P	Р	
Abdominal <sup>[1]</sup>	Р	Р	P		P	P	Р	P	Р	Р	
Pediatric											
Small Organ (specify)											
Neonatal Cephalic											
Adult Cephalic											
Cardiac											
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>	Р	Р	Р	, .	Р	Р	P	Р	Р	Р	
Exam Type, Means of Access									,		
Transesophageal											
Transrectal	Р	Р	Р		Р	Р	Р	Р	Р	Р	
Transvaginal	Р	Р	Р		Р	Р	Р	Р	Р	Р	
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

Notes:	[1] Abdominal includes GYN/Pelvic;
	[4] Other use includes Urology/Prostate;
	[*] Combined modes are B/M, B/Color M, B/PWD, B/Color/PWD, B/Power/PWD.

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# **GE LOGIQ 9 with 7L Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

					Mode	of Ope	eration				
Clinical Application	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler		Combined Modes	Harmonic Imaging	Coded Pulse	
Anatomy/Region of Interest			Борран	- cpp		'''					
Ophthalmic			<del> </del>							P	
Fetal / Obstetrics	Р	Р	P		Р	Р	Р	Р	Р		-
Abdominal	Р	Р	Р		Р	Р	Р	Р	Р	Р	
Pediatric											
Small Organ <sup>[2]</sup>	Р	Р	Р		P	Р	Р	P	Р	Р	
Neonatal Cephalic							-				
Adult Cephalic											
Cardiac											
Peripheral Vascular	P	Р	P		Р	Р	Р	Р	Р	P	
Musculo-skeletal Conventional	Р	Р	Р		P	Р	₽	Р	Р	Р	
Musculo-skeletal Superficial											
Other <sup>[4]</sup>											
Exam Type, Means of Access											
Transesophageal											
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

	7			1	1	1	i e	1	1	,	1
Intravascular											<u> </u>
Laparoscopic											
N = new indication; P = p Notes: [2] Small organ in					dded und	der Appe	endix E				
[*] Combined mod					B/Color	/PWD, B	/Power/	PWD.			
									·		
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	Co	ncurren	ce of CD	RH, Offic	e of Devi	ice Evalu	ation (O	DE)			
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Division of Reproductive, Abdominal, ENT, and Radiological Devices

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### **GE LOGIQ 9 with 10L Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application	В	М	PW	CW	Color	of Ope	Power	Combined		Coded	T
Anatomy/Region of Interest			Doppler	Doppler	Doppler	Doppler	Doppler	Modes	Imaging	Pulse	
Ophthalmic											
Fetal / Obstetrics	Р	P	Р		Р	P	Р	P	Р	Р	
Abdominal	Р	Р	Р		Р	Р	Р	Р	P	Р	
Pediatric	Р	Р	Р		Р	P	Р	Р	Р	P	
Small Organ <sup>[2]</sup>	Р	Р	P		Р	Р	Р	Р	Р	Р	
Neonatal Cephalic											
Adult Cephalic											
Cardiac											
Peripheral Vascular	Р	Р	P		Р	Р	Р	Р	Р	Р	
Musculo-skeletal Conventional	Р	Р	Р		Р.	Р	P	Р	Р	Р	
Musculo-skeletal Superficial	Р	Р	Р		Р	Р	Р	Р	Р	Р	
Other (specify)											
Exam Type, Means of Access											
Transesophageal											
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative <sup>[5]</sup>	Р	Р	Р		Р	Р	Р	Р	Р	Р	
Intraoperative Neurological	Р	Р	Р		Р	Р	Р	P	Р	P	
Intravascular											
Laparoscopic											

Laparoscopic					<u> </u>					- We grown	<u> </u>
N = new indication; P = pr	eviously	cleared	by FDA	E = ac	dded und	der Appe	endix E				
Notes: [2] Small organ inc	cludes b	reast, te	stes, thy	/roid.							
[5] Intraoperative i	ncludes	abdomi	nal, thor	acic, an	d vascul	ar. Neu	rosurgic	al added	via K970	901.	
[*] Combined mod	es are E	3/M, B/C	olor M, E	3/PWD,	B/Color/	PWD, B	/Power/	PWD.			
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(Division Sign-Off) Division of Reproductive, Abdominal, ENT,

and Radiological Devices

510(k) Number <u>Ko11188</u>

### **GE LOGIQ 9 with i12L Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

		Mode of Operation									
Clinical Application  Anatomy/ Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M	Power	Combined Modes	Harmonic Imaging	Coded Pulse	
Ophthalmic											
Fetal / Obstetrics											
Abdominal <sup>[1]</sup>	Р	Р	Р		P	Р	Р	Р	Р	P	
Pediatric	Р	Р	Р		Р	Р	Р	Р	Р	P	
Small Organ (specify)	P	Р	Р		Р	P	Р	Р	P	P	
Neonatal Cephalic											
Adult Cephalic											
Cardiac <sup>[3]</sup>	Р	Р	Р		Р	Р	Р	P	Р	Р	
Peripheral Vascular	Р	Р	Р		Р	Р	Р	P	Р	Р	
Musculo-skeletal Conventional	Р	Р	Р		Р	Р	Р	<u>P</u>	Р	Р	
Musculo-skeletal Superficial	Р	Р	Р		Р	Р	Р	P	P	P	
Other (specify)											
Exam Type, Means of Access											
Transesophageal							,				
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative <sup>[5]</sup>	Р	Р	Р		Р	Р	Р	Р	Р	Р	
Intraoperative Neurological											
Intravascular											•
Laparoscopic											

N = new indication; P = previously cleared by f	FDA: E = added under Appendix E
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- [3] Cardiac is Adult and Pediatric via Intraoperative;
- [5] Intraoperative includes abdominal, thoracic, and vascular.
- [\*] Combined modes are B/M, B/Color M, B/PWD, B/Color/PWD, B/Power/PWD.

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510(k) Number\_

#### **GE LOGIQ 9 with M12L Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

		Mode of Operation									
Clinical Application  Anatomy/Region of Interest	В	М	PW- Doppler	CW Doppler	Color Doppler	Color M			Harmonic Imaging	Coded Pulse	
Ophthalmic											
Fetal / Obstetrics											
Abdominal											
Pediatric	Р	P	Р		P	Р	Р	P.	Р	P	
Small Organ <sup>[2]</sup>	Р	Р	Р		Р	P	P	Р	Р	P	
Neonatal Cephalic											
Adult Cephalic											
Cardiac											
Peripheral Vascular	Р	Р	Р		P	Р	Р	P	Р	Р	
Musculo-skeletal Conventional	P	Р	P		Р.	Р	Р	Р	P	Р	
Musculo-skeletal Superficial	Р	P	Р		P	Р	Р	Р	Р	Р	
Other (specify)											
Exam Type, Means of Access											
Transesophageal											
Transrectal								·			
Transvaginal											
Transuretheral											
Intraoperative [5] (specify)	Р	P	Р		Р	Р	P	Р	Р	Р	
Intraoperative Neurological											
Intravascular											
Laparoscopic  N = new indication; P = pre											

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Notes:	[2] Small organ includes breast, testes, thyroid.	
	[5] Intraoperative includes abdominal, thoracic, and vascular.	

[*] C	ombined modes a	re B/M,	B/Color N	M, B/PWD,	B/Color/PWD,	B/Power/PWD.

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#### **GE LOGIQ 9 with 3S Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

		Mode of Operation									
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler			Harmonic Imaging	Coded Pulse	
Ophthalmic											
Fetal / Obstetrics	Р	Р	Р	Р	Р	Р	P	P	P	P	
Abdominal <sup>[1]</sup>	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	
Pediatric	P	Р	Р	P	Р	Р	Р	Р	Р	Р	
Small Organ (specify)											
Neonatal Cephalic	Р	Р	Р	Р	Р	Р	Р	P	P	Р	
Adult Cephalic	Р	Р	Р	Р	P	Р	Р	Р	Р	P	
Cardiac <sup>[3]</sup>	P	Р	Р	Р	Р	Р	Р	P	P	Р	
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>	P	Р	Р	Р	P	Р	Р	Р	Р	Р	
Exam Type, Means of Access											
Transesophageal											
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological											
Intravascular											
Laparoscopic				<u> </u>							

N =	new indica	ation: P :	= previously cle	ared by	FDA:	F=	adde	ed under	Appen	dix F	F

Notes:	[1]	Abo	lomi	nal	in	C	ludes	•	GYI	٧,	
		_		4	_				_		

- [3] Cardiac is Adult and Pediatric;
- [4] Other use includes Urology;
- [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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#### **GE LOGIQ 9 with 4S Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

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					Mode	of Ope	eration				
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppier	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	
Ophthalmic											
Fetal / Obstetrics	P	Р	Р	P	Р	P	Р	P	Р	Р	
Abdominal <sup>[1]</sup>	Р	P	Р	Р	Р	P	P	P	P	Р	
Pediatric	Р	P	Р	Р	Р	Р	Р	P	P	Р	
Small Organ (specify)											
Neonatal Cephalic	Р	Р	Р	P	Р	Р	Р	Р	P	P	
Adult Cephalic	Р	P	P	Р	Р	Р	Р	Р	Р	Р	
Cardiac <sup>[3]</sup>	Р	Р	Р	Р	Р	Р	Р	P	P	Р	
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>	Р	Р	Р	Р	Р	Р	Р	Р	P	Р	
Exam Type, Means of Access											
Transesophageal								- 1			
Transrectal											
Transvaginal											
Transuretheral								'			
Intraoperative (specify)											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

١	l = new indication; P	= previously	cleared by FDA;	E = added under	Appendix E
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Notes:	[1]	Abdominal	includes	Renal	and	GYN;
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- [3] Cardiac is Adult and Pediatric.
- [4] Other use includes Urology;
- [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)

Division of Reproductive, Abdominal, ENT,

and Radiological Devices

510(k) Number 7011/88

#### **GE LOGIQ 9 with 7S Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

		Mode of Operation										
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes	Harmonic Imaging	Coded Pulse		
Ophthalmic												
Fetal / Obstetrics	Р	Р	Р	Р	Р	P	Р	P	P	Р		
Abdominal <sup>[1]</sup>	Р	Р	Р	Р	Р	Р	Р	P	P	Р		
Pediatric	Р	Р	Р	Р	Р	Р	Р	Р	P	Р		
Small Organ (specify)												
Neonatal Cephalic	Р	Р	Р	Р	Р	P	Р	Р	Р	P		
Adult Cephalic	Р	P	P	Р	Р	Р	Р	Р	Р	P		
Cardiac <sup>[3]</sup>	Р	Р	P	Р	P	Р	P	Р	P	Р		
Peripheral Vascular												
Musculo-skeletal Conventional												
Musculo-skeletal Superficial												
Other (specify)												
Exam Type, Means of Access												
Transesophageal												
Transrectal												
Transvaginal												
Transuretheral												
Intraoperative (specify)												
Intraoperative Neurological												
Intravascular												
Laparoscopic												

N = new indication; P = previously cleared by FDA; E = added under Appendix E

Notes: [1] Abdominal includes GYN;

[3] Cardiac is Adult and Pediatric.

[4] Other use includes Urology and GYN.

[\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

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Division of Reproductive, Abdominal, ENT,

and Radiological Devices

## **GE LOGIQ 9 with 10S Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

					Mode	of Ope	eration			r	_
Clinical Application	В	М	PW	CW	Color	Color M			Harmonic	Coded	
Anatomy/Region of Interest			Doppler	Doppler	Doppler	Doppler	Doppler	Modes	Imaging	Pulse	ļ
Ophthalmic		ļ	ļ				-				
Fetal / Obstetrics											ļ
Abdominal	Р	Р	Р	P	P	Р	P	Р	Р	Р	ļ
Pediatric	Р	P	P	P	Р	Р	Р	P	P	Р	
Small Organ (specify)											
Neonatal Cephalic	P	Р	Р	Р	Р	Р	Р	P	P		
Adult Cephalic	P	P	Р	Р	Р	P	Р	Р	Р	Р	<u> </u>
Cardiac <sup>[3]</sup>	Р	Р	P	Р	Р	Р	Р	P	P	P	
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other (specify)											
Exam Type, Means of Access											
Transesophageal											
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological					•						
Intravascular											
Laparoscopic											

Laparoscopic				<u> </u>							<u> </u>
N = new indication; P = pr	eviously	cleared	by FDA	E = ac	ded und	der Appe	endix E				
Notes: [3] Cardiac is Adu	It and Pe	ediatric.									
[*] Combined mod	les are E	8/M, B/C	olor M,	B/PWD (	or CWD,	B/Color	/PWD o	r GWD, I	3/Power/	PWD.	
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				and	Radiolo	ogical D	evices				
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### **GE LOGIQ 9 with 2D Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

					Mode	of Ope	eration			<b></b>	_
Clinical Application	В	м	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic	Coded Pulse	
Anatomy/ Region of Interest			Dopplei	Dopplei	Dobbiei	Dobbiei	Dopplei	Modes	Imaging	Puise	_
Ophthalmic											_
Fetal / Obstetrics			<b>.</b>								
Abdominal											
Pediatric											<u> </u>
Small Organ (specify)		!									
Neonatal Cephalic											
Adult Cephalic											
Cardiac <sup>[3]</sup>				Р							
Peripheral Vascular				P							
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other (specify)											
Exam Type, Means of Access											
Transesophageal											
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological											
Intravascular											
Laparoscopic							1				

Transarcinciai		1	1	1	1 .	1	1	1	1	
Intraoperative (specify)										
Intraoperative Neurological										
Intravascular										
Laparoscopic										
N = new indication; P = pr Notes: [3] Cardiac is Adu	-		1 by FD <i>F</i>	A; E = ac	dded und	der Appe	endix E			
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### **GE LOGIQ 9 with 6D Transducer**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation											
Clinical Application  Anatomy/ Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppier	Color M Doppler			Harmonic Imaging	Coded Pulse		
Ophthalmic						, , ,				-		
Fetal / Obstetrics	,											
Abdominal												
Pediatric												
Small Organ (specify)												
Neonatal Cephalic												
Adult Cephalic												
Cardiac <sup>[3]</sup>				Р								
Peripheral Vascular				P								
Musculo-skeletal Conventional												
Musculo-skeletal Superficial								,				
Other (specify)												
Exam Type, Means of Access												
Transesophageal												
Transrectal												
Transvaginal												
Transuretheral												
Intraoperative (specify)												
Intraoperative Neurological												
Intravascular												
Laparoscopic					1							

Intraoperative Neurological											
Intravascular											
Laparoscopic											
N = new indication; P = p	reviously	cleared	by FDA	4; E = a	dded un	der App	endix E				
Notes: [3] Cardiac is Adu	ilt and Pe	ediatric.									
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								Abdomin	ial, ENT,		
				an	d Radiol	ogical E					
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